

**BUILDING 1151/1153 AREA SITE-SPECIFIC ADDENDUM TO THE
PRESIDIO TRUST LAND USE CONTROL MASTER REFERENCE
REPORT**

PRESIDIO OF SAN FRANCISCO, CALIFORNIA

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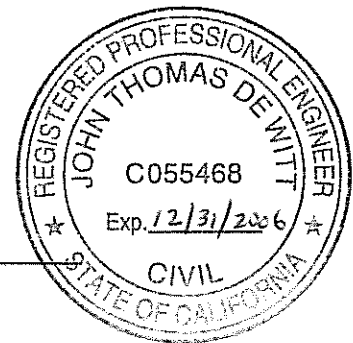
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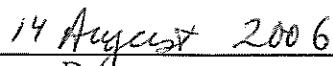
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Date

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Presidio of San Francisco, California

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Figure 1: Building 1151/1153 Land Use Control Area

Table 1: Building 1151/1153 Land Use Controls

1. INTRODUCTION

The California Environmental Protection Agency, Department of Toxic Substances Control (“DTSC”) requires sites that do not fully meet the most stringent Presidio-specific human health cleanup levels (i.e., residential cleanup levels), or if residual chemicals are left in place such that a cover is required, to have land use controls to inform and protect future users. This Site-Specific Addendum has been prepared for the Building 1151/1153 Area as an addendum to the Presidio Trust Land Use Control Master Reference Report (“LUCMRR”) because certain areas within the Building 1151/1153 Area do not meet Presidio-specific residential cleanup levels for chemical concentrations in soil. The Presidio-specific residential cleanup levels are presented in the *Presidio-wide Cleanup Level Document* (EKI, 2002). Land use plans, which govern future use of the Presidio, designate the Building 1151/1153 Area for recreational human land use (NPS, 1994; Trust, 2002; EKI, 2002). This Site-Specific Addendum for the Building 1151/1153 Area identifies the land use control (“LUC”) area, the chemicals of concern (“COCs”) that exceed residential cleanup levels, and the specific land use restrictions that apply.

2. BUILDINGS AND AREAS INCLUDED IN THE LAND USE CONTROL

The specific areas addressed in this addendum include the areas bounded by Buildings 1151 and 1152, including the courtyard between these buildings which contains Building 1153. Figure 1 shows the locations of these buildings and the LUC area. While the extent of chemical impact was in the courtyard between the buildings, the buildings should not be used for residential or other similar uses because the courtyard would be the adjacent “yard” area. Therefore, the LUC area includes both of the buildings and the courtyard to prevent the buildings from being converted to residential use while the LUC applies.

3. REMEDIATION SUMMARY AND REMAINING CHEMICALS OF CONCERN

This section describes the site history and remedial actions implemented at the Building 1151/1153 Area and identifies the remaining COCs.

3.1 Site History

As described in the *Presidio Trust Revised Feasibility Study Report, Main Installation Sites* ("FS") (EKI, 2003), Building 1153 is a concrete pad that was constructed in 1941 for storing transformers. The *Preliminary Assessment* ("PA") (Argonne National Laboratory, 1989) states that the site was investigated in 1987 and polychlorinated biphenyls ("PCBs") were found in soil near the pad. The Army performed additional testing during their remedial investigation to further characterize the extent of PCBs in soil. PCB-containing transformers were removed from Building 1153 (E.C. Jordon Company, 1990), and soil containing PCBs was subsequently excavated in accordance with an Engineering Evaluation/Cost Analysis ("EE/CA") that the Army prepared (Army, 1996).

The Army excavated contaminated soil at the Building 1151/1153 Area in June 1997. Approximately 81.5 tons of PCB-containing soil was excavated to a depth of 2 feet below ground surface ("bgs") near the concrete pad and from the courtyard between Buildings 1151 and 1152. An additional 10 tons of PCB-containing soil was excavated to a depth of 1 foot bgs from an area southeast of the former storage shed. A total of 91.5 tons of soil was removed and transported for disposal at an off-site, permitted waste management facility.

The Army performed remedial actions to achieve cleanup levels for petroleum hydrocarbons in soil established in RWQCB Order No. 96-070 and 1 mg/kg of PCBs in soil proposed in the EE/CA (Army, 1996). These cleanup levels were achieved as summarized in the closure report for Building 1153 (IT Corporation, 1999).

Based on the *Presidio Trust Management Plan* (2002), land use at the Building 1151/1153 Area is considered recreational.

3.2 Residual Chemicals Above Residential Cleanup Levels

According to the *Presidio-wide Cleanup Level Document* (EKI, 2002), the applicable cleanup level for PCBs for recreational land use is 0.39 mg/kg, and the Presidio cleanup level for PCBs for residential land use is 0.16 mg/kg. To guide the excavation during the remedial action, the Army used immunoassay test kits with a detection limit of 1 mg/kg, the applicable Army cleanup level at the time of remediation. Therefore, based on soil data collected during the Army's remedial action, residual soil showed PCBs above the Trust's risk-based cleanup levels. The FS stated that a residential land use controls would be required at the Building 1151/1153 Area.

The maximum concentrations of PCB 1260 and PCBs (0.96 and 0.44 mg/kg, respectively) remaining in soil at the Building 1151/1153 Area are from sample 1153EX40 at 0.5 feet bgs. The PCB concentrations in this soil sample were greater than the applicable PCB cleanup level of 0.39 mg/kg established for protection of recreational land use in the Presidio-wide Cleanup Level Document (EKI, 2002).

In the *Revised Feasibility Study Report* (EKI, 2003), the Trust evaluated the residual PCB concentrations. To evaluate if the residual concentrations of PCB 1260 or PCBs in soil pose a risk to recreational receptors such that further cleanup is warranted, the 95 percent upper confidence limit (“UCL”) on the arithmetic mean of residual PCB concentrations in soil was computed for the Building 1151/1153 Area. U.S. EPA (1989) refers to this value as the exposure point concentration (“EPC”) in its risk assessment guidance. Only laboratory analytical results were used to compute the EPC. Field immunoassay analytical results of verification samples (31 data points) were not included in the EPC calculation because the high detection limit of 1 mg/kg for these semi-quantitative analyses would bias the EPC. The EPC was computed to be 0.54 mg/kg for PCB 1260 in soil (11 data points) and 0.31 mg/kg for PCBs (15 data points) in soil at the Building 1151/1153 Area. The statistics generated to perform this calculation are shown in the table below. A description of the approach and the equations used to calculate the EPC is presented in the *Revised Feasibility Study Report* (EKI, 2003).

| PCBs in Soil at the Building 1151/1153 Area | | |
|----------------------------------------------------|-----------------------------|----------------|
| Chemical | PCB 1260 | PCBs |
| Number of Data Points | 11 | 15 |
| Data Distribution | Non-parametric ¹ | Non-parametric |
| Arithmetic Mean of Lognormally Transformed Data | -2.5 | -2.1 |
| Standard Deviation of Lognormally Transformed Data | 1.1 | 0.92 |
| Percent UCL to Represent EPC | 95% | 95% |
| EPC | 0.54 mg/kg | 0.31 mg/kg |

The EPC provides an estimate of the reasonable maximum exposure (“RME”). As defined by U.S. EPA (1989), the RME is the highest exposure that is reasonably expected to occur at a site. Under the RME approach, some exposure variables, such as the EPC, will not be at their individual maximum values. Although the EPC does not reflect the maximum concentration that could be contacted at any one time, U.S. EPA (1989) regards the EPC as a conservative estimate of the concentration likely to be contacted over time. The representative concentration of PCBs in soil (0.31 mg/kg) at the Building 1151/1153 Area is less than the applicable recreational cleanup level of 0.39 mg/kg.

¹ A non-parametric data distribution is neither a normal nor lognormal distribution.

The EPC of PCB 1260 (0.54 mg/kg) is greater than the applicable recreational cleanup level of 0.39 mg/kg. The recreational cleanup level is based on an estimated lifetime incremental cancer risk of 1×10^{-6} . An EPC of 0.54 mg/kg corresponds to an estimated lifetime incremental cancer risk of 1.4×10^{-6} for recreational populations. According to U.S. EPA's Risk Assessment Guidance for Superfund (U.S. EPA, 1989), risks should be calculated to one significant figure. Rounding to one significant figure, the estimated lifetime incremental cancer risk for potential exposure of recreational users to PCB 1260 in soil at the Building 1151/1153 Area is 1×10^{-6} , which is the target risk level for this population. Therefore, the residual PCB 1260 concentrations in soil should not pose a significant risk to current and future users of the site under a recreational land use scenario.

4. BUILDING 1151/1153 AREA SITE-SPECIFIC LAND USE RESTRICTIONS

Because residual PCB concentrations in a limited area are greater than the residential cleanup level of 0.16 mg/kg, general and site-specific land use restrictions apply to the Building 1151/1153 Area. The general restrictions are listed in Section 3.1 and 3.2 of the LUCMRR and are incorporated by reference. The coordinates for four corner points of the LUC area field located by the Trust are provided in Table 1. The information in Table 1, including the LUCs, will be included in the Trust's geographic information system ("GIS") for reference by potential site users. The site-specific land use restrictions for the Building 1151/1153 Area are described below.

- Sensitive uses, such as housing, schools, playgrounds, hospitals, and day care facilities, or any other uses involving the regular and constant use by children, the infirm, or the elderly in outdoor areas are prohibited.
- Soil excavated from the LUC area shall be sampled and analyzed for all COCs including PCBs before such soil may be reused at the Presidio or disposed appropriately offsite. Soil can be reused on-site only if chemical concentrations in the excavated soil are less than the cleanup levels applicable to the receiving site (per the Cleanup Level Document) and hazardous waste criteria (California Code of Regulations, Title 22, Section 66261).

5. REFERENCES

Argonne National Laboratory, 1989. *Enhanced Preliminary Assessment Report: Presidio of San Francisco Military Reservation, San Francisco, California*. Prepared for U.S. Army Toxic and Hazardous Materials Agency. November 1989.

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Department of the Interior, National Park Service, 1994. *Creating a Park for the 21st Century, from Military Post to National Park – Final General Management Plan Amendment, Presidio of San Francisco, Golden Gate National Recreation Area, California*. July 1994.

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EKI, 2002. *Development of Presidio-wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water, Presidio of San Francisco, California*. October 2002.

EKI, 2003. *Presidio Trust Revised Feasibility Study Report, Main Installation Sites, Presidio of San Francisco, California*. March 2003.

International Technology Corporation, 1999. *Soil Removal Action Completion Report, Buildings 680 and 1153, Presidio of San Francisco, California*. February 1999.

Presidio Trust, 2002. *Presidio Trust Management Plan, Land Use Policies for Area B of the Presidio of San Francisco*. May 2002.

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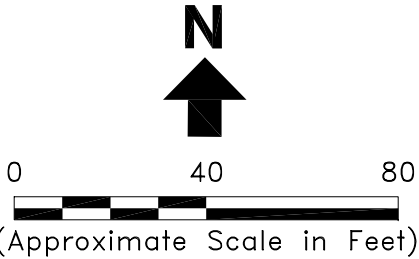
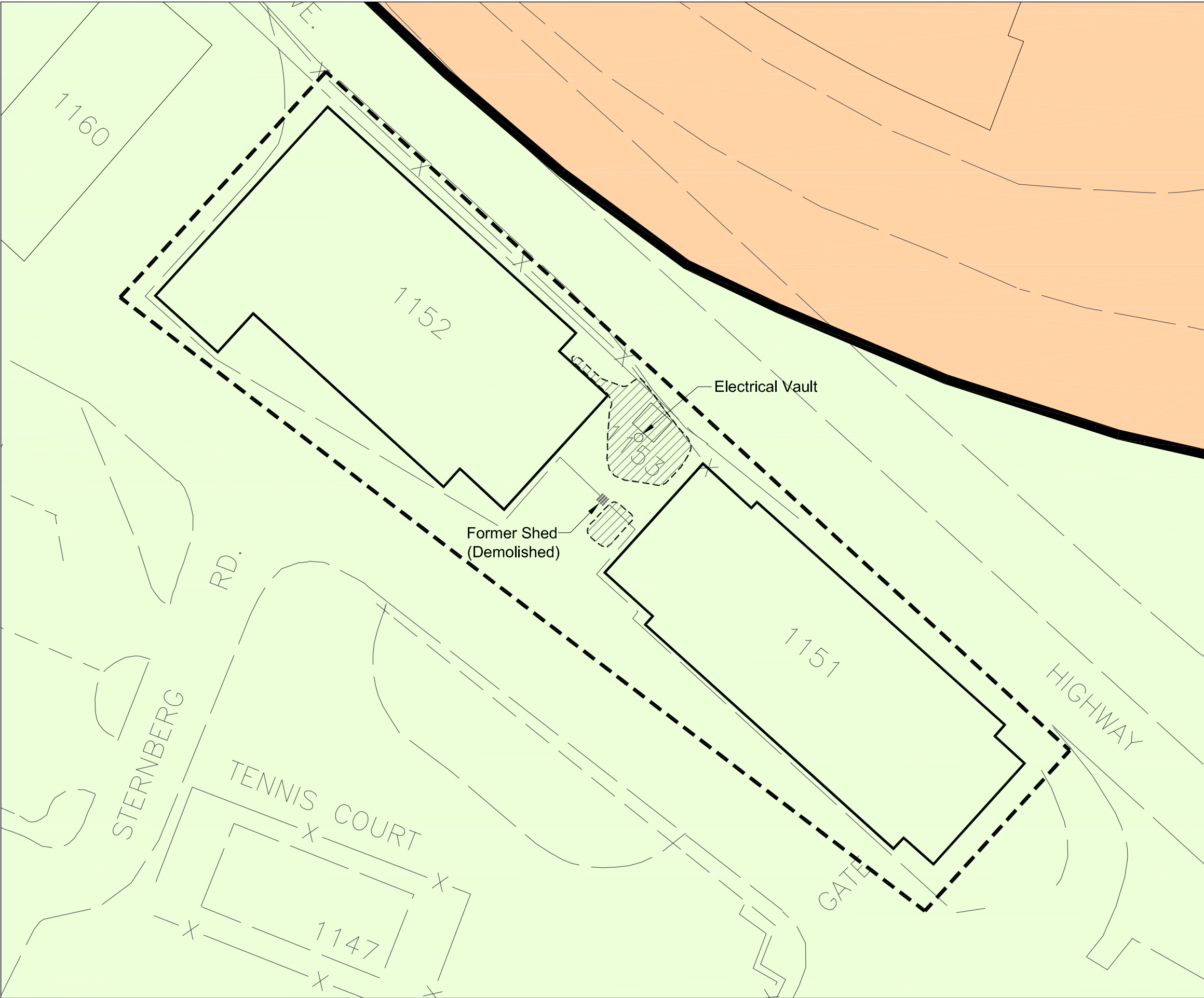
TABLE 1
BUILDING 1151/1153 AREA LAND USE CONTROLS

Presidio of San Francisco, California


| Site Name | Land Use Controls | Regulatory Requirement for LUC? | | | LUCMRR Addendum Information | | |
|-------------------------|----------------------------------------------------------------------------------|---------------------------------|-----------------------------|--|-----------------------------|-----------|---------------------|
| | | | Coordinates of 4 Points (a) | | Name | Date | File Name |
| Building 1151/1153 Area | (Valid Values) • Sensitive Use Restrictions • Soil Management Requirements | Yes Yes | A | | Bldg 1151/1153 Area LUC | 8/11/2006 | Bldgs 1151-1153.pdf |
| | | | Northing | | | | |
| | | | Easting | | | | |
| | | | B | | | | |
| | | | Northing | | | | |
| | | | Easting | | | | |
| | | | C | | | | |
| | | | Northing | | | | |
| | | | Easting | | | | |
| | | | D | | | | |
| | | | Northing | | | | |
| | | | Easting | | | | |


Notes:

(a) Provide field surveyed coordinates in Northing East UTM Meter Zone 10 North coordinates.

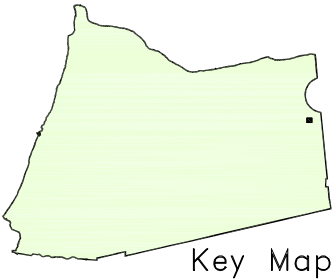


LEGEND

 Perimeter of Former Excavation

 Perimeter of Land Use Control Area

- Notes:**
- 1. All locations are approximate.
 - 2. Basemap was provided by Presidio Trust.



Erler & Kalinowski, Inc.

Building 1151/1153
Land Use Control Area



Presidio Trust
San Francisco, CA
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EKI A000003.14
Figure 1